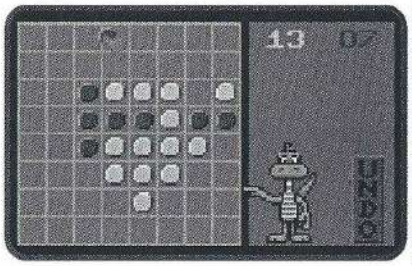
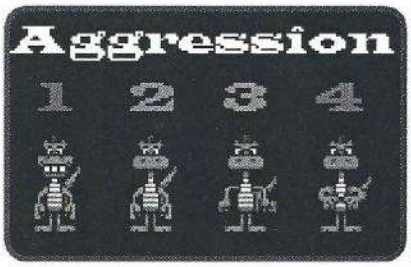
▪ JUNGLE GUIDE ▪

#1





Lynx Othello

Concept and code: Harry Dodgson ▪ Graphics: Harry Dodgson ▪ Audio: Harry Dodgson

▪ Background ▪

Harry Dodgson has a long and colorful history as an Atari fan. Not content to sit on the sidelines while his favorite Atari systems were often undersupported, Harry pursued game development on multiple Atari platforms. He even published the 2600/7800 Monitor cartridge with Atari's blessing a number of years ago!

Lynx Othello is Harry's first published effort for Atari's excellent handheld system. Othello is a timeless classic, and a welcome port to the Lynx. The game supports solo play (including a nifty animated opponent named Pounce, who gets annoyed with you if you sit idle too long) and head-to-head play (via alternating on a single Lynx, or via comlynx with a second Othello cartridge or a LGSS cartridge).

▪ Interview ▪

1. Give us some background on yourself.

Harry Dodgson: That's a bit intrusive, yes?

2. How did you get involved working on the Atari Lynx?

HD: I bought one from Sears mail order when it first came out. When the Jaguar came out, I looked at it and realized I like the 6502 better than the 68000. Atari also relaxed the dev kit rules about that time and I could buy a Pinky/Mandy without the Howard board. That saved a lot of $$.

3. Othello is a nice game for the Lynx; there's not much in the way of board games in the Lynx library, after all. And Othello if a great strategy game. What was it like working on this game? Were you able to accomplish everything you wanted?

HD: It was 90% complete for almost exactly two years when I went back to it. Atari wanted a reasonable per cartridge fee to license Pounce, but they wanted it for the first 10,000 cartridges in advance. So it just sat on the Amiga hard drive.

No, it doesn't have all that I wanted. I just set a cutoff date and made sure that what was in the game at that point worked.

4. Tell us about the LGSS feature, and your stand-alone LGSS cart. What functionality does this feature provide to the end user? What about to an aspiring developer?

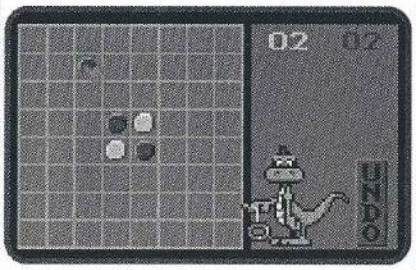
HD: As far as LGSS, look at the GBA and you can see that I wasn't the only one that thought it was a good idea. The idea of buying one game at regular price and comlynxing with another system was a good one even though Atari marketing killed it before the Lynx was released.

With respect to developing, it makes it easier to test eight (or more) player games when you only have to update one copy instead of eight.

5. Any cool aspects of Othello -- hints, cheats, hidden pics/features, developer stories, etc. -- you'd like to share with us?

HD: There are 2 Easter Eggs in Othello - One is where it plays itself (at a higher speed). The other is just a digitized sound demo that I put on the cartridge to take up more space.

Lynx Othello



6. Have you considered working on another Lynx game? If so, what kind of game(s)?

HD: I play around with the code for "Space Battles" every so often. I dropped it down from 16 player ComLynx to 8 player as I doubt there will ever be 16 people in one place at one time that would play it. I have some sound bugs to work out (that was the last addition I made to it).

7. What are you up to these days?

HD: I go to work, I eat, I sleep, I watch DVDs, I play echh-box games on my HDTV and Dreamcast games on a computer-grade projector. I've also been putting my favorite tunes from my music collection into iTunes on my G4 cube and iPod.

■ Strategy ■

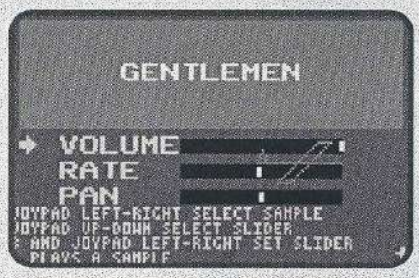
Hey, it's Othello. Go read a strategy book or something. OK, if you don't have time for that, here are a few tips:

- Try to keep a few of your own color in the center. Even if you're temporarily outflanked, don't sweat it. Just wait for the right opportunity to use a center piece to take over a string of opposing pieces.
- Get your pieces to the edge first. Barring that, get your pieces to the edge in such a way that your opponent can't immediately jump you and take over your pieces on the edge.
- Grab a corner whenever you can. Corners can never be stolen once you own them. ■

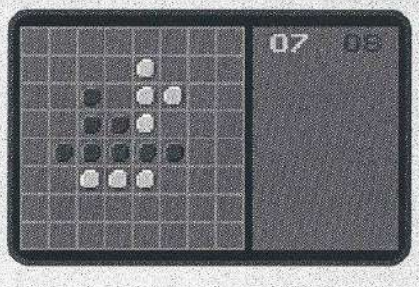
■ Cheats ■

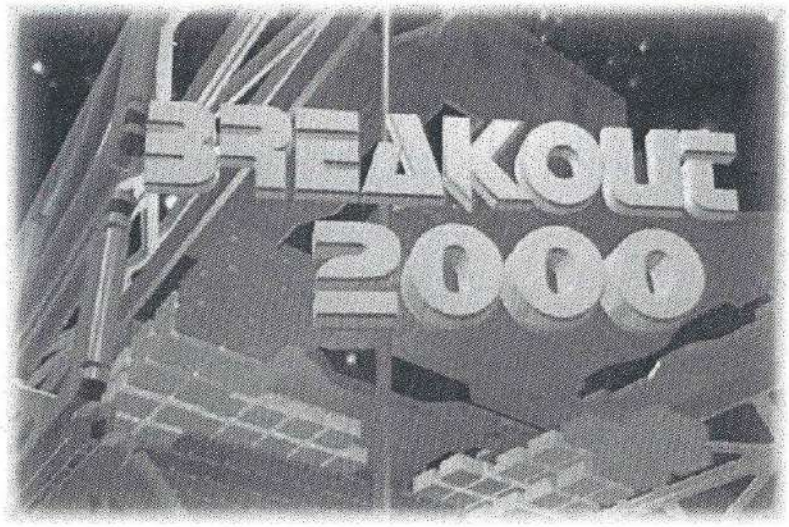
There are two easter eggs in Othello:

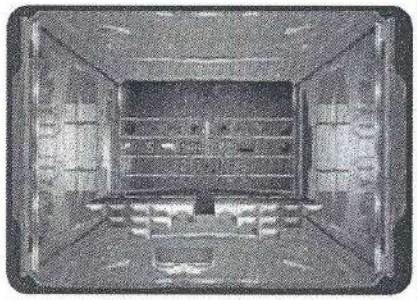
Digitized sound demo - Press Pause repeatedly starting at the title screen. You'll eventually be taken to a hidden screen with a little plane flying overhead. This is a neat gizmo screen where you can play various digitized samples and even alter their playback parameters!

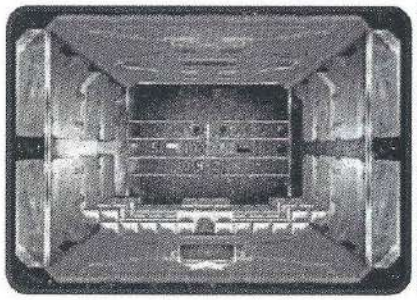


Self-play mode - Press A on the title screen to go to the 1 or 2 player select screen. Press Up, Right, Down, Left. The game will start playing itself at a high speed.









Breakout 2000

Concept and code: Mario Perdue, Richard Degler ■ Graphics: Gary Degler ■ Music: Douglas Perdue

■ Background ■

Sometime in 1995, Mario Perdue found himself talking to Atari rep J Patton, when he mentioned he was looking for some work to do. J Patton recommended that Mario try doing a Jaguar game, and got a dev kit out to him.

A month and a half later, Mario submitted a simple 3D Breakout-style game called WalZ 3D for review. Bill Rehbock called Mario a few days later, and asked him if he'd like to sign a contract to do Breakout 2000 for Atari. Mario, being the savvy independent developer that he is, said yes.

The game was completed in early 1996, but of course that was too little, too late for Atari to publish new Jaguar games. Telegames instead stepped up and worked out a deal to publish this game for hungry Jaguar fans during the 1996 Christmas season.

■ Interview ■

1. Give us some background on yourself, and how you got involved working on the Atari Jaguar.

Mario Perdue: Wow, where do I start? I got started with computers in '70 or '71 when the high school I went to got a connection to the Education Center's mainframe. There were a few of us in an independent study group that were allowed to do a little programming in BASIC. After high school I joined the US Air Force and got involved in electronics. I was stationed in North Dakota, so to kill time I would go into the electronics lab and write diagnostic programs. Anyway, after the Air Force I worked for a few years as a Field Engineer and/or Tech Support Engineer until I finally got tired of it all and started my own company. In the early days, I was working on a CAD/CAM product called DynaCADD for Ditek, International. I finished that project just in time to get very ill and spent most of the next year in and out of the operating room.

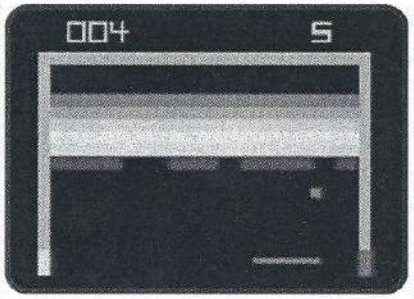
After about a year of recuperating, I was talking to J Patton at Atari. I don't remember if I called him or he called me, but I remember telling him that I was finally feeling up to doing some work again. He suggested programming the Jaguar and offered to send me a development system to work with to see if I could program it. After about a month and a half, I sent him a copy of a 3D Breakout style game called WalZ 3D. Bill Rehbock called me a few days later to ask if I would be interested in completing the game as Breakout 2000 for Atari. It sounded like an opportunity to make money, so I agreed.

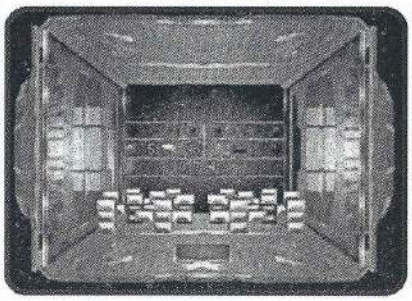
2. How was Breakout chosen for a Jaguar project? Did you work on any other Jaguar projects?

MP: Atari originally had some other game (I never found out what) in mind for me to write, but they liked the 3D breakout concept that I had sent them and they had several other good ideas to work into it too. Unfortunately, they didn't last long enough to do any other programs for them.

3. How was the project funded? How much interaction did you have with Atari during development? (Feel free to share any anecdotes about humorous, cool, or frustrating incidents.)

Breakout 2000





MP: The project was funded directly by Atari as a job for hire. The basic game was obviously based on the original Atari program Breakout. I put together the original program specification that the contract was based on. Later, as the game started to come together, Atari had a lot of recommended changes. I remember one of the first Atari requests: They wanted the ball to move from one players area to the other. We discussed it and it was a pretty big change to the existing code. Bill Rehbock called me one day and we had a conversation that went something like this:

Bill: We really want you to do this.
Me: That's really a big change to the code. I'm not sure I can get it in there.
Bill: We'll add XX dollars to the contract.
Me: No problem, I'll get right on it.

4. Is the rumor true that you were the last Jaguar developer to be paid by Atari? How did that happen?

MP: I've heard that it is true, but I don't know it to be a fact. I know that Atari and JTS merged shortly after I was paid and I don't recall talking to any other developer who was paid after me. I really don't know why my contract was paid when it seems that others may not have been, but I'm glad it was.

5. What was your development role on Breakout 2000, and what was the most enjoyable (or frustrating) aspect of the project? Who else worked on the Jaguar version?

MP: I was the lead programmer and wrote the bulk of the code and did some of the minor graphics (the balls, paddle and bricks.)Richard Degler contributed some of the code and helped a lot with optimizing various routines. Gary Degler was responsible for all the remaining graphics. My son, Douglas Perdue, did the musical score. Unfortunately, the score had to be simplified a lot to get it to work. It's really a much better score than what you hear in the game. Most of the sound effects came from an earlier game I did for the ST called WalZ.

Working on Breakout 2000 was one of the most enjoyable experiences I've had in my career. All of the people at Atari (even Leonard) were easy to work with and very supportive. I remember hearing a lot of negative comments about Atari, from many developers, but I never experienced any of the problems they talk about.

6. What technical challenges did you overcome, and what did you think of the final result?

MP: Breakout 2000 wasn't really a technically challenging project, it's mostly just Breakout with a little 3D. The biggest thing was getting all the code, graphics and sounds to fit in a standard cartridge. There's very little empty space in that cart.

Overall, I'm pretty happy with the final result. I wish I had made a few better decisions in the earlier stages of the design; there are several things I could have done differently that would have made the game play more smoothly. The star-field effect in the background really bites. It also bothers me that one known bug got through the testing phase.

7. When was the game completed? Did Atari see/test the final version?

MP: The game was completed in early March of 1996. There were several weeks of intense testing that were done by a California company for Atari. It was obvious that the people doing the testing had never played the original Breakout. Several of the original bug reports were not bugs at all, they were just the way Breakout works. Anyway, Atari did see and accept the final product.

8. Tell us how Telegames ended up licensing the game for publication, and what your involvement was at this time.

MP: I don't know how this came about. I found out about it when a representative of Telegames (I think his name was Terry Grantham) called and asked me some questions about the game. He told me they wanted to release it but there wasn't much in the way of documentation. I agreed to put together a manual for him in exchange for a few copies of the released game. One BIG oversight in the manual is that I forgot to credit my son for the game music. It's a good thing he's family or I'd probably have been sued.

9. Any cool aspects of the game -- hints, cheats, hidden pics/features, etc. – you'd like to share with us?

MP: No, with the exception of the cheat codes that seem to be available everywhere, there's nothing else hidden in there. I was surprised to see the cheat that is

Breakout 2000

supposed to banish the droids. We didn't intentionally code that one in there.

10. Tell us more on Speedster II and Skycopter. How did you get signed up to do these projects, how long did development take, who paid for development, etc.?

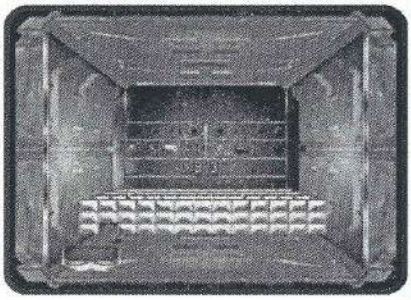
MP: Carousel, International was referred to me by Don Thomas at Atari. They had done a simple Kiddie ride of a car with a video monitor to display some scenery on. The original prototype was done on a PC and was pretty expensive so they called Atari to see if they could help make it cheaper. At the time, Atari had a whole warehouse full of Jaguars that they wanted to unload, so they suggested that they try to do something with it. A representative from Carousel came to Indianapolis to talk to me about the project and Speedster II was born. The first version of Speedster II took about a month and a half to complete. Later, there were a few minor fixes and upgrades to the ride. Skycopter II was a helicopter ride that was very similar to Speedster II. The same base code was used on both projects. The final delivery of both versions and all copyright documentation occurred in January of 1997. Carousel, International funded both projects.

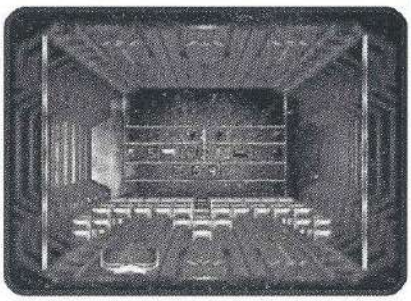
11. What are you up to nowadays?

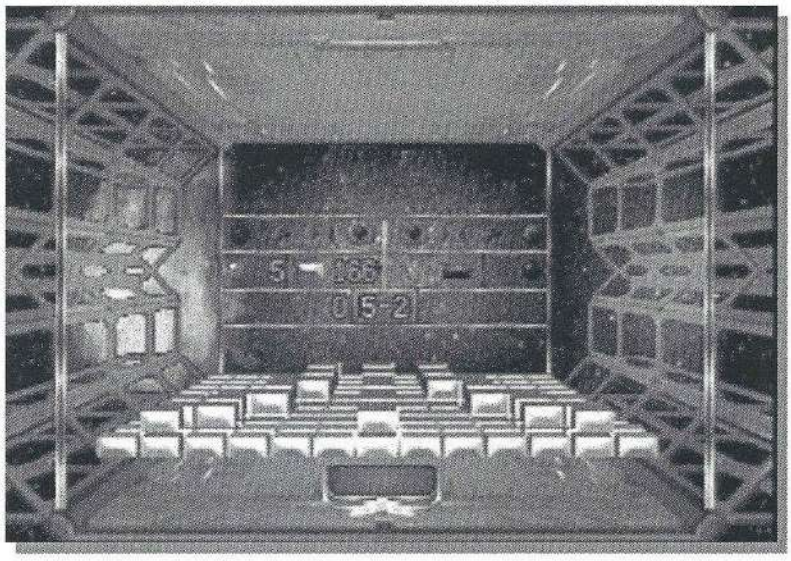
MP: Not very much. I recently completed a five year contract with Sony's PlayStation group where I did a variety of work from supporting Net Yarose to helping with the redesign of the PlayStation Developer's web site. I'm currently negotiating a new contract with Sony and looking for other work.

Mario, thanks for bringing a true classic to the Jaguar in the form of Breakout 2000, and for sharing some insights with us on the game!

MP: No problem, it's been fun. ■







Level 5-2 of Breakout 2000 features an Atari Fuji laid-out in the bricks.

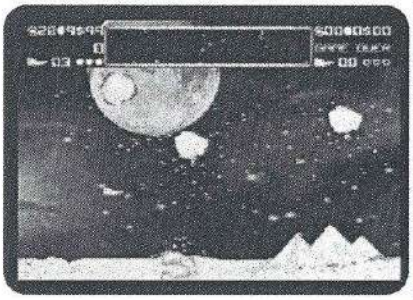
■ Cheats ■

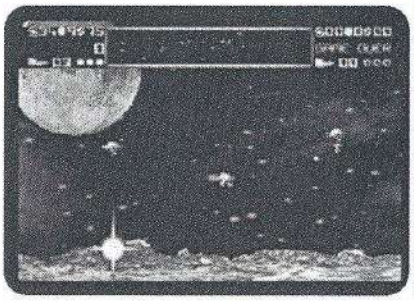
Enter all cheats after bricks are formed, but before any balls are launched:

99 Balls	1+3+5
Skip Level	1+6+7
Skip Phase	1+5+7
Super Ball	7+8+9+1
Plasma Cannon	7+8+9+2
Attract Ball	7+8+9+3
Catch On	7+8+9+4

Banish Robots - When robots appear during gameplay, press * + #

VGDB





Protector

Concept and code: Joergen Bech and Carl Forhan ▪ Graphics: Jaguar Community ▪ Music: Carl Forhan

▪ Background ▪

Protector definitely took the long road to Jaguar publication. Started by Joergen Bech essentially as a solo project way back in 1994, most fans were completely unaware of this game until Joergen dropped a few posts on Usenet several years later indicating he had once worked on an unpublished Jaguar game.

Songbird founder Carl Forhan contacted Joergen and his former employer, Bethesda Softworks, and eventually secured the rights to develop and publish Protector in 1998. The rest, as they say, is history...

▪ Interview ▪

1. Give us some background on yourself, and how you got involved working on the Atari Jaguar.

Joergen Bech: Born in Denmark back in 1968. Got interested in computers around the time of the ZX80/81/Spectrum. Bought my first home computer (16K ZX Spectrum) back in early 1983. Learned programming by typing in BASIC games from magazines and books. Started playing around with assembly language after one year. Finished my first 100% assembly language game (Crazy Cars) a year later (1985) (actually, the game took 3 months to write). Did a couple more games for the Speccy in 1987.

Got my first Amiga 500 plus monitor plus hw reference manual in late 1987 (I think). Played around with it for quite a while before starting work on "Globulus", a game which eventually landed me a contract/position with Innerprise Software Inc. First trip to the U.S., but left after 5 months (earned a grand total of $2500 for those 5 months of work - and that included the plane ticket). Did some work on the Sega Master System (Spider-Man) and Mega Drive (68000 sound driver). Turned my back at the industry in disgust after the Innerprise experience...

Four years later, the memory of Innerprise had faded away and I was offered a job at Bethesda on the basis of my 68000 + general console/game programming experience. That, and knowing somebody who knew somebody, etc.

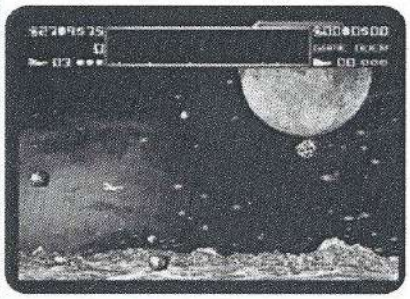
2. How was Protector chosen for a Jaguar project? Did you work on any other Jaguar projects?

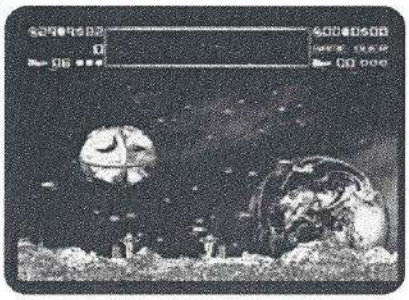
JB: Basically, the company had a couple of Jaguar Dev Kits lying around, provided free of charge by Atari (who was desperate for more/new titles, which is the reason why the company got them for free - something like that). What Bethesda really wanted of me was to write a game using a raycasting engine (ala Doom), perhaps porting Delta-V or one of their Terminator titles, but everyone – myself included – quickly realized that my 3D programming skills were not up to scratch. This was back in 1994, before source code and techniques for writing 3D engines were readily available on the Internet.

There was also some talk about converting a PC basketball game to the Jaguar, but 1) the game was not finished on the PC platform until long after I started at the company, 2) it was developed by an outside team, which would have made communication a pain, and 3) I did not really like the game (sorry) and had next to no interest in doing it.

But I had to work on something, so we dug out an old Amiga Defender clone and set to work on that instead. The important thing was to gain some experience with the console – experience which could be utilized

Protector





for more important projects later – and to assess its potential.

3. What was it like working with Bethesda? How about Atari? (Feel free to share any anecdotes about humorous, cool, or frustrating incidents.)

JB: Ah! Let's just say it was... interesting. Pretty much all of the 7 months I was there involved work, work, and more work. Usually 50 hours a week, but often more. On weekends I would hop on a bus to get to the various shops/malls in the area. Then there were the usual Computer Sale Shows (something we don't see in Denmark) where I would hunt for shareware cd's with all that stuff one gets off the Internet today. One of these Shows even had a guest appearance by James Doohan (who looked as if he had seen better days). Hanging out with other developers (well, I used to hang out with the artists, which was unusual for a developer at that company), watching X-Files or playing Virtua Fighter at the local arcade. Got through those 7 months with only one case of food poisoning (bad pizza – go figure). Had a great apartment, but (next to) no furniture, as I never really felt like I would be able to commit to any long-term association with the company.

Protector was a "test" project on many levels :)

4. What was your development role on Protector, and what was the most enjoyable (or frustrating) aspect of the project? Who else worked on the Jaguar game?

JB: I was the designer, developer, graphics artist, etc...

Seriously, it was more like: "Go sit in a corner and get to know the hardware. If anything good comes out of it, we will try to sell it." The most frustrating part of the whole thing was the last month or so where it was getting increasingly obvious that it was never going to get released.

5. What technical challenges did you overcome, and what did you think of the final result?

JB: The bugs in the "sound" processor (something about not being able to make two consecutive memory writes, I think) were "fun". Having to make as much run in parallel as possible.

I did reach a point late in the project where I simply could not compile the thing anymore, but a visit to Brainstorm's FTP site provided me with an updated compiler which solved the problem.

The source code examples provided by Atari were not of any great use.

I cannot remember any major difficulties, other than obtaining information about various sound and graphics formats – stuff that was not specifically related to the Jaguar.

I was moderately pleased with the result, but the game could have used a "real" graphics artist on the project as well as more variety. It was certainly more enjoyable to *play* than much of what was available on the Jaguar at the time (anyone for a game of Checkered Flag?) but it was also quite obvious from its lack of depth, variety, and presentation that here was something created by a single person doing everything himself.

6. Why was the game shelved? Had Atari ever seen the game at this point?

JB: I believe Atari saw a copy of it back in early 1995 (January? February?) As they (Atari) had their own Defender (2000) game coming out, they did not want to publish it under the Atari label. As for publishing it as a Bethesda title, that was not going to happen either: The CEO did not want to buy (read: get stuck with) any hardware (which in this case means cartridges) – especially at a time when it was so obvious that the Jaguar was not going to be the next Big Thing. Back in early 1995, it was not exactly clear what horse to bet on. It was widely accepted that Jaguar, Amiga CD32, Philips CD-I and 3DO were not going to make it. The Sega 32X was a stop-gap solution, which left the upcoming Sega Saturn, Nintendo Project64 and that newcomer company Sony's new machine, codenamed PSX.

I think Bethesda or one of its out-of-house development teams played around with the Sega Saturn for a while, but that was after I had left the company. I really just quit my job without discussing with management if there were anything else they would have liked me to work on. Cannot go into details as to why i quit. All I can say is that the chemistry just was not there. I could probably have gone on to work on a Saturn game. There was also some early discussions about doing a super-hero game on the PC, using the in-house developed 3D engine, but with my limited PC experience and the preliminary deadlines discussed, I could see that this was not going to happen. My apologies to the artists for effectively killing the project by leaving, but I am sure I would not – at the time – have been able to deliver the goods.

7. Any cool aspects of the game – hints, cheats, hidden pics/features, etc. – you'd

Protector

like to share with us?

JB: This was not a game with lots of hidden secrets to unlock [Editor's note: cheats available below]. The goal was to produce a game that simply was enjoyable to play, even to those who have completed it several times over. Y'know: switch off your brain, immerse yourself in the game, play it beyond the point where you have stopped noticing your surroundings, be one with the game, etc. Very few games allow you to do this; games today are so swamped with storylines, shops, interaction with other characters, CGI cut-scenes, and so on, that some basic qualities are lost. The few shoot-em-ups that do appear now and then often go so far overboard that you (I) feel out of control. Like:

"Let's fill the screen with 200 enemy bullets"
"But any player will die within 5 seconds?!?"
"No problem: We will just provide him with a stronger shield, bigger smart bombs, more retries, yadda yadda yadda..."

No, give me Galaxians, Asteroids, Robotron 2084, Joust (my all-time favorite), etc. any day.

8. What are you up to nowadays?

JB: Doing Visual Basic programming at http://www.runtime.dk Selling out? Maybe. The money is certainly better than anything I got doing games – and the hours are fewer.

Game programming is fun at the start and the end of a project, but a great deal of time in-between, it is just programming and one does not really make any distinction. I do not think I would get back into game programming again. The kind of games I like to play are provided by emulators everywhere, giving access to an infinite amount of gameplaying hours. Looking at it this way, what difference would it make? No – only if a really original idea popped into my head – or if I could not think of any other test project for learning a new programming language. Sokoban, anyone? :)

Don't really have much time for playing video games anymore, but I did get around to buying my first Dreamcast (cutting edge stuff!) in 2002. Great fun! Low polygon count, but some good titles here and there.

■ Cheats ■

Invincibility - Press and hold Pause+4+5+6 while on the title screen. An audio explosion confirms Invincibility has been enabled. Repeating the process will disable it (confirmed by "I'm hit" audio).

Award 75 credits - While paused, hold 3+1+6 and press pause to resume the game. Audio confirms. Your credits will be adjusted to 75.

Rapid Fire - While paused, hold 6+7+8 and press pause to resume the game. Audio confirms. Rapid Fire is now activated.

Insane Wave - Beat the 10 Easy waves and you will unlock the Insane wave. This can be selected at the Options screen.

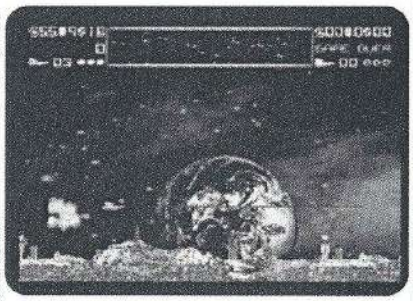
■ Strategy ■

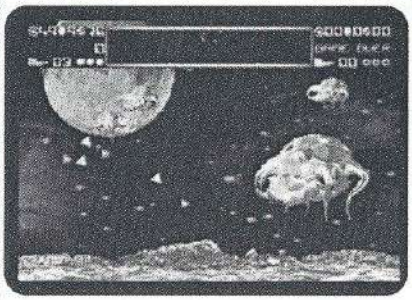
General Tips:

Buy a few shields as soon as you can, but only use them in emergencies (meteor showers or bosses). Next buy some smart bombs – keeping 10 or so on hand is a good start. In most cases you shouldn't need to buy Rapid Fire because you can get that during the game; getting a few extra guys if you have coinage to spare is good, too.

Enemy Tips:

The Spy will turn into a Baiter if you let it go offscreen. Since a Baiter always yields a powerup, this can be a quick way to amass lots of credits for the Galactic Shop.





Pods can be quite deadly; blast the Pod with your laser then use a Smart Bomb to destroy the released Swarmers. Or get multiple Pods onscreen and use a pair of Smart Bombs to destroy them all in one fell swoop.

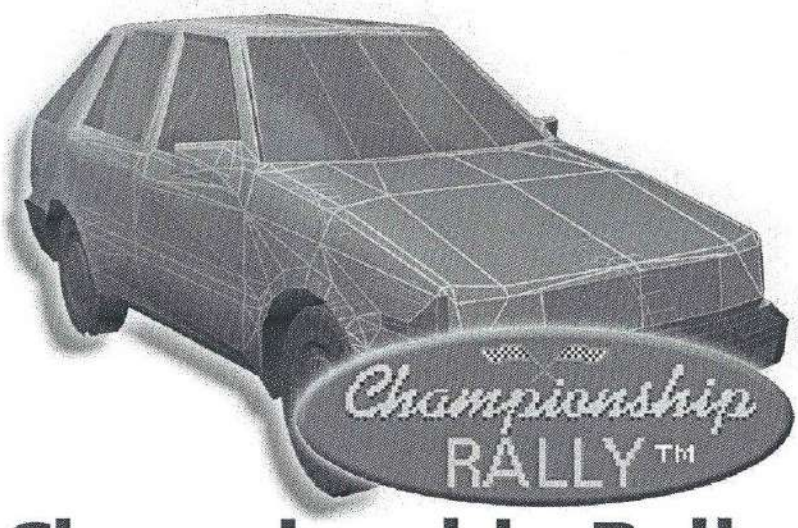
Killer Bees appear later in the game. These foes do not shoot you, but move fast and take several hits to kill. Be sure to steer clear if you don't have time for multiple shots.

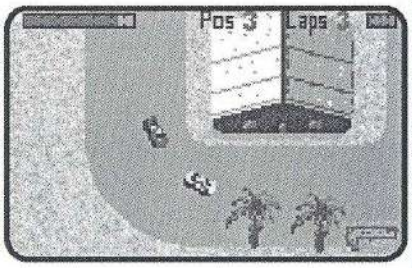
Flak Cannons are very annoying, but also easy to destroy at the start of a wave before everything kicks into high gear. Simply find the right the position where you can take them out without harming your inhabitants, and make a beeline across the level.

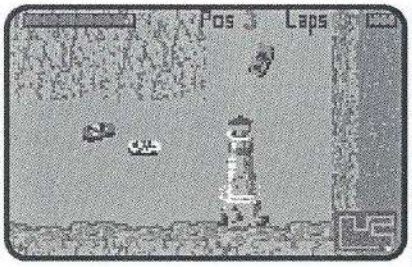
Meteors are indestructible but they pack a lot of punch. Stay close to the bottom of the screen, usually near the horizon, and slowly edge to the left or right to stay ahead of them. Use shields or hyperspace in a panic to survive.

■ Techie Trivia ■

A number of waves feature a city in the landscape. This graphic is derived from the famous Seattle skyline.







Championship Rally

Concept and code: Lucien Kleijkers ■ Graphics: Lucien Kleijkers and Carl Forhan ■ Audio: Carl Forhan

■ Background ■

Multiplayer action has been the hallmark of many of the best Lynx games. It's therefore no surprise that newcomer Lynx developer Lucien Kleijkers wanted to exploit the Lynx's powerful networking hardware in his first game, Championship Rally. Championship Rally was published in December 2000 by Songbird Productions, and offers Lynx gamers an impressive top-down racer for up to 4 players via comlynx.

But don't think it stops there. Championship Rally includes a slew of great features, including seven unique tracks featuring a variety of terrain and layered graphics, hidden shortcuts, powerups, and a slew of options like car color, number of laps, damage control, and the speed of Lynx-controlled cars.

All in all, this game is a worthy addition to the Lynx library and perhaps the most impressive game developed and published independently for the system to date.

■ Interview ■

1. Give us some background on yourself.

Lucien Kleijkers: I have a bachelor degree in computer science and have been working the last 10 years as a software engineer. I moved 5 years ago from Europe to the US.

2. How did you get involved working on the Atari Lynx?

LK: I love portable gaming and bought the Atari Lynx II when it came out. I bought several games and thought the Lynx was really great but after a while it was clear that there weren't as many games released as planned. This was very disappointing especially since the competing gameboy didn't have a backlit screen and wasn't even in color then. Many years later after Atari dropped the Lynx completely I found by coincidence Bastian's page that you could create games yourself for the Lynx. I ordered the comlynx cable from Songbird and started doing some programming. Uploading first time from PC to lynx was quite an amazing experience as I could now upload my own graphics and game and see it directly on the Lynx screen.

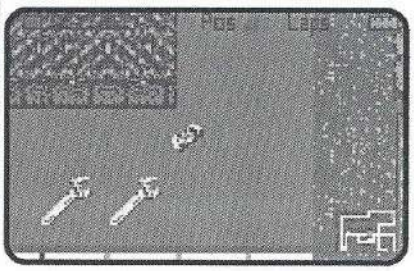
3. Championship Rally is an impressive game for the Lynx, especially considering it was released in 2000 -- over three years since the last official release from Atari. What was it like working on this game? Were you able to accomplish everything you wanted in the overhead racing game engine?

LK: There's definitely more in the game than initially planned for especially the multiplayer support. I didn't think I could do this but due to the help from other hobbyist Lynx developers I was able to get this working. However one thing I wanted to have were bigger tracks and at that time I wasn't experienced enough how to do this without any performance hit. So if there would be a sequel than that would be the first thing I could improve.

4. How much did you rely on the Lynx hobby community to help fill in the gaps in your code, test the game, provide artwork, etc.?

LK: Without the lynx developer community there would have probably no released game. Especially when I was optimizing the speed of the game and implementing the comlynx code. The game initially ran only at 8 frames per second! Also there is

Championship Rally



only limited documentation on the web on advanced Lynx programming.

5. Any cool aspects of Champ Rally -- hints, cheats, hidden pics/features, etc. -- you'd like to share with us?

LK: All tracks have 1 or 2 shortcuts except the second one. One hint for the city track: you can drive over a sidewalk/alley in one place. Also some tracks have moveable objects and some people have asked what these are for so here's part of the answer: the purpose varies but in some tracks these objects can be moved to make use of a shortcut.

When you manage to complete the tournament you get a nice congratulations picture with a code depending how many points you gathered. If you have at least 96 points you get a secret code to unlock all tracks at once at the credits screen.

There are also 3 secret codes for the load tournament code. One will give you a higher top speed and acceleration. The screen will flash red and you will see the word 'Cheat' displayed at the tournament screen. The only hint I'll give here is that the codes are words.

[Editor's note see our Cheats section below for more details]

6. Have you considered working on another Lynx game? If so, what kind of game(s)?

LK: I've considered creating a Wolfenstein 3D clone and with lots of optimization work I was able to get a 3D raycaster running on the lynx at 15-20fps. However seeing the amount of work it involved I didn't consider finishing it. Other than that I recently created a fast running scrolling map routine for the Lynx. For instance you could have tracks 10 times as big as in Championship Rally with no performance loss. I also considered doing a Summer Games type of game for the lynx but didn't have time recently to work on this.

7. What are you up to these days?

LK: I'm quite busy at work and didn't have much time to do much Lynx related stuff but hopefully in the future I'll have more time to work on some new Lynx games.

■ Cheats ■

Re-center car on track - At any time during a race you may press Option 1 to re-center your car on the track. This can come in handy when you take a really wrong turn and get stuck in the shrubs!

Unlock all tracks - At the credits screen, hold Option 2 and Up then press Option 1 to unlock all tracks until you power off your Lynx.

Enter the following passwords in the Load Game screen for the Tournament mode (the word "Cheat" appears at the bottom of the following screen if entered successfully) :
FAST - Screen flashes red, this gives you the max speed (176) in tournament races
CAAA - Alternate steering, now use A for right turn and B for left, Up for accelerate, and Down for brake/reverse.
SAND - All tracks are now unlocked until you power off your Lynx.

■ Strategy ■

Desert Track
Difficulty: EASY

Work on your powerslides on this track - two hairpin turns require that you get used to accelerating through your turns. Pick up speed on the top straightaway, but make sure you slow down in time for the second hairpin.

The shrub at the first inside corner of the track is movable. Knock this object onto the track to hinder your opponents.

There is a shortcut near the left edge of the map. Note the two trees between the two buildings on the left side of track (right before the hairpin turn). Your car can squeeze through here, and you can shave a second or two off your lap time with some practice.

Meadow Track
Difficulty: EASY

This is definitely the easiest track of the game. The goal here is speed, and lots of it. Take note of the road signs, they give you a hint when it's time to turn.

The second hay bale is movable. Knock this object onto the track to hinder your opponents.

Downtown Track
Difficulty: HARD

This track will catch you off guard because it's the first (of many) that will grind your car to a halt when you hit any track edge, but with some practice you'll find this track isn't that bad. Study the overview to work out the correct path ahead of time, because you're guaranteed to lose if you take some wrong turns! Use powerslides to navigate the S-track in the upper left corner, and take advantage of the oil slick and speed boost in the lower left corner to take the lead.

Championship Rally

Note the repair wrench on the right side of the track which can be used to quickly fix your car.

There is a shortcut in the center of the track. After the first part of the S-track, turn the car left towards the center of the track. There is a wide sidewalk which you can use to sneak down to the last leg of the track (right on top of the speed boost). This will all but guarantee your success.

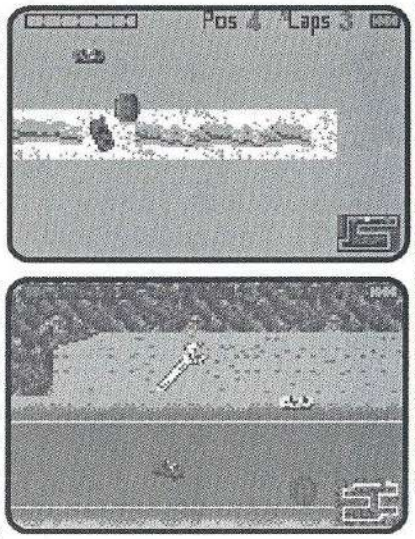
Alaska Track
Difficulty: MEDIUM

The cool part about this track is you're driving on ice, which makes this the slippiest track of the game. Take everything you've learned about powerslides from the previous tracks, and really crank it into high gear on this one if you want any hope of catching up to the lead car. The upper right hair pin is by far the hardest part of this course be prepared to let off on the gas or even brake heading into this turn. Most other turns can be handled close to top speed, though. Avoid the lake at all costs, or you'll lose precious seconds while your car reappears on the track.

The barrel in the median of the upper right hairpin is movable. Not only does pushing out this barrel hinder your opponents, but it also opens up a shortcut you can use. There's also shortcut if you go straight down the right side of the lake, but this is tough to navigate and it makes it difficult to hit the speed boost at a good angle.

Coastal Track
Difficulty: HARD

The name of the game: DON'T GO OFF THE CLIFF. Falling off the cliff costs you several seconds before your car reappears; this penalty is much worse than bumping into the interior cliff wall, which will slow you down but keep you on the course. The upper right hairpin is probably the trickiest section of the track. Resist the temptation to pick up speed on this corner, because slow and steady wins the race on this track. Instead, use the far left and bottom straightaways to gain ground on the lead cars. Timing the lower left turn is easy with a few tries, and eventually you won't have to slow down at all on this part. Take advantage of the oil slick near the center right of the track to maintain your momentum as well.



Nothing movable on this track, but there is a rather large shortcut you can take if you really find yourself getting whipped by the Lynx cars over and over. At the center top of the track, in the bottom left of the "U", there is a hidden portal where you can go down into the center of the mountain wall. Follow this path to the left and up slightly until you reenter on the left straightaway.

Valley Track
Difficulty: MEDIUM

This track is similar to the Downtown track since you are surrounded by walls along the track which will stop you on contact, but the Valley track is much less confusing than the Downtown one. Lots of turns and only one long straightaway keeps this from being a high speed track. Once again take advantage of the oil slicks to allow sharper turns, pick up the speed boost on the top straightaway (or the repair wrench, if your car's in trouble), and avoid the potholes.

There is a shortcut right after the hairpin in the lower right. You'll see a multi-color tunnel which you can enter by turning to the right. It only cuts out a small section of track, but it's easy to hit this shortcut and you won't lose much speed.

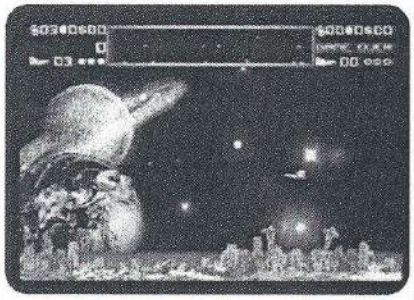
Formula Track
Difficulty: MEDIUM

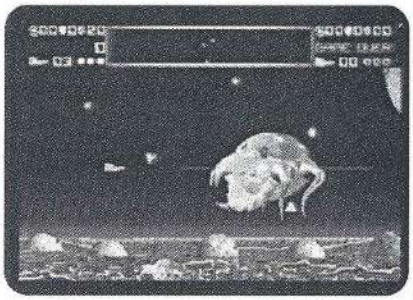
This is a high speed track with a bunch of cool features, including a loop, a pit stop, and the tightest hairpin of the game (the Alaska one benefits from the slippery turns), and of course some billboards for other Lynx games published by Songbird. Note you are required to complete the loop in the lower right as part of the course - don't try any shortcuts here. There aren't any speed powerups, but thankfully multiple long straightaways give you a chance to build speed. Veer off to the pit stop in the bottom center of the track if your car is damaged and needs some repair wrenches.

There is a shortcut hidden right before the ultra-tight hairpin in the lower left. Before you turn left from the straightaway to approach the hairpin, bump the combo Ponx/Remnant billboard above you. After a few nudges, you'll open up a shortcut that allows you to bypass the hairpin altogether! ■

■ Techie Trivia ■

The game was actually shipped with only two-player support advertised, but in reality Lucien had included support for four players. There was just one small problem – no way to test it! But shortly after the game's release, an awesome Lynx fan named Tom Legare stepped up and offered to test out the game with four players. Voila! All four players worked without a hitch in the published game. Special thanks to Tom for his extra effort!





Protector SE

Concept and code: Joergen Bech and Carl Forhan ■ Graphics: Jaguar Community ■ Music: Carl Forhan

■ Background ■

Songbird Productions published the original Protector game for eager Jaguar fans way back in 1999. The game went on to be a flagship title for Songbird, and was popular enough to warrant the release of an updated version called Protector SE in 2002 which, besides containing a slew of new graphics and audio and gameplay tweaks, also included several useful hobbyist features such as BJL, JagFree CD, and a glass-mastered Native Demo CD.

■ Interview ■

1. Give us some background on yourself, and how you got involved working on the Atari Jaguar.

Carl Forhan: Long-time Atari fan ever since my Dad bought an Atari 2600 around 1980. Sort of got out of gaming during what would later be known as "The Crash", but with the help of the internet in the 1994-ish timeframe I rediscovered gaming and learned that Atari had actually produced the Lynx and Jaguar in the meantime.

At this point I had been doing embedded C/C++ professionally for several years, and after a bit of poking I found out that a few dedicated hobbyists were trying to produce new Lynx games; a few years after that I found hobbyists on the Jaguar scene as well. So I stuck around both scenes, learned some stuff along the way, and took a stab at doing some Lynx games. I wanted to do a Jaguar game, but doing a proper one from scratch seemed – and still seems – like a massive effort, so nothing materialized at first.

2. How did you get involved with Protector? Have you worked on other Jaguar projects?

CF: I contacted Joergen once I saw some Usenet posts from him about a shelved Jaguar game he had worked on. He put me in touch with his former employer who held rights to the title and code, and thankfully they were very reasonable about licensing the game to me.

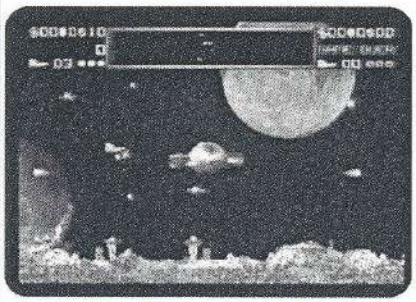
The great thing about the Protector code was that it was a fun, buildable game from the first moment I received it. Sure, it had a ways to go to balance the gameplay and create 40+ waves for the game (not to mention some new graphics and audio), but having a game in the 60-70% complete phase right from the start was a great motivator for learning the code and seeing how I could improve things.

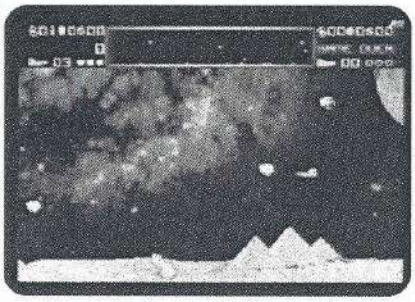
Protector SE then came about because after I published Protector, I realized there were many things I could have added or improved but didn't think about at the time.

I haven't really worked on much else Jaguar-wise. I did a proof-of-concept Jaguar CD slideshow for the Classic Gaming Expo 5th Anniversary, and have done some minor libraries and testing for the benefit of other developers, but beyond that my free time has been scarce.

3. Protector already had quite a bit completed when you acquired the game, correct? What did you add to it (both original and SE versions)?

CF: For Protector, I added/integrated some





enemy graphics, created new enemy AI, the entire powerup scheme (didn't exist in the code I received from Joergen), all 40+ waves, ship handling, game saves, bosses, and more.

For Protector SE, I integrated and balanced all 40 waves into one set, changed some gameplay features, fixed a bug or two which slipped through on Protector (ack!), did new tunes, new background graphics, victory screens, easter eggs, JagFree CD, BJL, and more.

I also have to stop and say what a great community the Jaguar has. I'm a lousy artist, for example, so I relied heavily on other fans to contribute artwork used in various parts of the game. And several fans really put in some hours testing everything, especially the new JagFree CD function [Editor's note: JagFree CD allows unencrypted CDs to be played on a consumer Jaguar CD unit]. Thanks, everybody!

4. What technical challenges did you overcome, and what did you think of the final result?

CF: There were several bugs present in the original code, including a nasty collision problem. I also found out that the custom MOD convertor didn't convert MODs with 100% accuracy, so I hand-patched the converted MODs so they sounded right. And since I was relatively new to the Jaguar at the time, even doing something simple like displaying a pic in high-color was a big learning curve for me.

From a game perspective, I'm very happy with Protector SE. It's got a lot of audio and visual variety, many unique enemies to fight, and so on. Even now I find myself occasionally playing the game – one I worked on for over two years of my life, mind you, so I've already played it for hundreds of hours – and still getting caught up in that action-packed rush where I'm bobbing and weaving through enemies and knowing if I push just a little harder, I can make it to the next level. That's the kind of game I really enjoy.

From a technical perspective, there are still things I wish could have been better. There are some high-color pics in the title sequence and victory screens, but everything in the game is 256 color because A) it's how I got the game and B) 8-bit graphics don't take up much space. And I don'tlike the MOD player very much, it's too quiet and sounds fuzzy more often than I would prefer.

6. Any cool aspects of the game -- hints, cheats, hidden pics/features, etc. -- you'd like to share with us?

CF: Plenty, see the section below. But I'll also say there's one really cool feature hidden in Protector SE which I'm not yet ready to reveal. :)

7. What are you up to nowadays?

CF: I'm still hacking away at Atari stuff in my limited free time. I try to split my time between Lynx and Jaguar projects, but I've got several Lynx projects very close to completion so they've been getting the lion's share of attention this year.

■ Cheats ■

Invincibility - Press and hold Pause+2+4+6 while on the title screen. An audio explosion confirms Invincibility has been enabled. Repeating the process will disable it (confirmed by "I'm hit" audio).

Enable All Wave Selects - Go to the Options screen. Highlight the "Save/Exit" option, hold Pause+Option, and press B to exit the screen.

Award 75 credits - While paused, hold 0+7+5 and press pause to resume the game. Audio confirms. Your credits will be adjusted to 75.

Rapid Fire - While paused, hold 4+6+8 and press pause to resume the game. Audio confirms. Rapid Fire is now activated.

Expert Mode - Beat all 40 waves and you will see a special victory screen and enable Expert Mode. You can now replay all 40 levels with a new ship graphic but the game is even tougher! Another victory screen awaits you at the end of Expert Mode.

Unlocked pictures - After beating the Normal Mode game, a JagFest 2001 picture is unlocked in the title loop. After beating the Expert Mode game, a JagFest Europe 2001 picture is unlocked in the title loop.

Hidden picture - Hold pause during the JagFest 2001 picture. When it fades, a picture of Songbird founder Carl Forhan will be displayed.

Protector SE

■ Strategy ■

General Tips:

Note the game difficulty cycles to some extent every 10 waves. So once you get past the bosses at waves 10, 20, and 30, you can look forward to a bit of a break on waves 11, 21, and 31. Likewise, if you find starting the game at wave 26 or 36 is too difficult, consider backing up to 21 or 31 and starting from there. This will give you time to ease back into the game and build up some powerups.

Buy a few shields as soon as you can, but only use them in emergencies (meteor showers or bosses). Next buy some smart bombs – keeping 10 or so on hand is a good start. In most cases you shouldn't need to buy Rapid Fire because you can get that during the game; getting a few extra guys if you have coinage to spare is good, too.

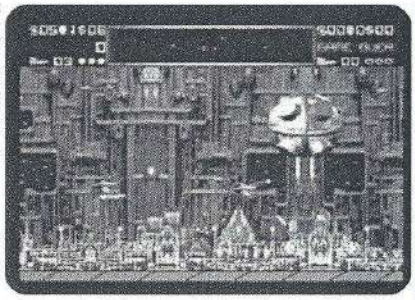
Enemy Tips:

Meteors are indestructible but they pack a lot of punch. Most meteors occur at the end of waves 9, 19, 29, and 39 (with a few sprinkled in here and there in the 30's). Use the radar to see where new meteors are falling down, and slowly edge to the left or right to stay ahead of them. Stay close to the bottom of the screen, usually near the horizon. Use shields or hyperspace in a panic to survive.

Boss Tips:

Birdbrain (Wave 10) – The Brain itself is indestructable and non-collideable, so don't waste your time shooting it. It will release a number of smaller fighters that are quite dangerous. Let the Brain come onscreen for just a moment so it releases 2-4 fighters, then veer quickly in one direction. The Brain can't release fighters unless it's onscreen with you. Take out the fighters, then repeat the process until no more fighters are released, and the Birdbrain will float away harmlessly.

Mother Ship (Wave 20) – The Mother Ship follows a simple diamond movement pattern. Note where it releases a pair of Swarmers during the pattern, and be ready to eliminate them. Otherwise, dodge shots while shooting the Mother Ship repeatedly until it's destroyed. Use the occasional shield to help you maintain a steady stream of fire.



Megaskull (Wave 30) – Very similar to the Birdbrain, but the skull fighters take more hits to kill.

Minelayer (Wave 40) – This boss is the most unpredictable, as it bounces in all directions with little warning. Look for a green powerup after the boss first splits into medium-sized mines. Shooting these medium mines will then result in even smaller mines, which thankfully don't shoot at you any more but move really fast. It's usually easier to keep some medium mines offscreen while you eliminate a series of small mines, then move on to the next medium mine and repeat.

■ Techie Trivia ■

One of the cheat codes is hidden in the wave 40 background graphics. And did you notice the fujis?

Protector SE contains a 2048-byte serial EEPROM for holding saved game data, but Protector SE itself only uses the first 128 bytes of this memory. The remaining bytes can be used to hold saved game data for future CD-based games which take advantage of the JagFree CD protocol.